Product Specifications & Manual

Custom Oligo Synthesis, antisense oligos, RNA oligos, chimeric oligos,
Fluorescent dye labeled oligos, Molecular Beacons, siRNA, phosphonates
Affinity Ligands, 2'-5' linked Oligos

Oligo d(T) Primers

Shipped at ambient temperature. Store at -20°C

For Research Use Only. Not for use in diagnostic procedures for clinical purposes

Material Supplied

Item	Catalog No.	Product Description	Size	Quantity		MW
❑	26-4000-04	Oligo d(T) 12	12 mer	100 µg	~28 nmols	3,588
❑	26-4000-01	Oligo d(T)16	16 mer	100 µg	~20.8 nmols	4,805
❑	26-4000-02	Oligo d(T)18	18 mer	100 µg	~15 nmols	5,413
❑	26-4000-05	Oligo d(T)12-18	12-18 mer	100 µg	~20 nmols	4,501*
❑	26-4002-10	Oligo d(T)23	23 mer	50 µg	~7.5 nmols	6,934
❑	26-4002-11	Oligo d(T)23 VN	25 mer	50 µg	~7.5 nmols	7,554
❑	26-4002-16	Oligo d(T)36	36 mer	50 µg	~6 nmols	10,889
❑	26-4002-19	Oligo d(T)50	50 mer	50 µg	~2.6 nmols	15,148
❑	26-3000-23	T7 Minimal Oligo d(T)23	46 mer	25 ug	~1.75 nmols	14,077
❑	26-3000-24	T7 Minimal Oligo d(T) 23 VN	48 mer	25 ug	~1.7 nmols	14,697
❑	26-3000-25	T7 Short Oligo d(T)23	49 mer	25 ug	~1.6 nmols	15,008
❑	26-3000-26	T7 Short Oligo d(T) 23 VN	51 mer	25 ug	~1.6 nmols	15,628
❑	26-3000-27	T7 Long Oligo d(T)23	73 mer	25 ug	~1.1 nmols	22,530
❑	26-3000-28	T7 Long Oligo d(T) 23 VN	75 mer	25 ug	~1.1nmols	23,150

*An average molecular weight is reported.

Sequence Information

Catalog No.	Description	Sequence (5'-3')
26-3000-23	T7 Minimal Oligo d(T)23	TAATACGACTCACTATAGGGAGATTTTTTTTTTTTTTTTTTTTTT
26-3000-24	T7 Minimal Oligo d(T) 23 VN	TAATACGACTCACTATAGGGAGATTTTTTTTTTTTTTTTTTTTTTVN
26-3000-25	T7 Short Oligo d(T)23	TAATACGACTCACTATAGGGAGAAGCTTTTTTTTTTTTTTTTTTTTT
26-3000-26	T7 Short Oligo d(T) 23 VN	TAATACGACTCACTATAGGGAGAAGCTTTTTTTTTTTTTTTTTTTTTVN
26-3000-27	T7 Long Oligo d(T)23	TGAAGCAGTGGTAACAACGCAGAGTAATACGACTCACTATAGGGAGAAGCTTTTTTT TTTTTTTTTTTTTTT
26-3000-28	T7 Long Oligo d(T) 23 VN	TGAAGCAGTGGTAACAACGCAGAGTAATACGACTCACTATAGGGAGAAGCTTTTTTT TTTTTTTTTTTTTTTVN

Certificate of Analysis & Product Specifications

This product is certified to prime first strand cDNA reaction using poly $(A)^+$ RNA as a template.

Appropriate nuclease free handling, dispensing and storage conditions required.

Recommended Usage

Use 2 µL of the 50 µM (50 pmol/ µL) solution for 1 µg poly $(A)^+$ RNA as a template in a 20 µL reaction volume.

See assay conditions for more details.

Description

Oligo d(T)12-18 is the classic primer mix used to prime synthesis of the first strand cDNA by reverse transcriptase using poly A^+ mRNA as a template.

Oligo dT of various sizes are synthesized individually and gel purified. Oligo d(T)12-18 is a mixture of individually synthesized and purified primers of varying sizes. These are mixed in an equimolar ratio. Oligo d(T)23 VN is particularly suited to initiate reverse transcription adjacent to the start of the poly A tail.

T7 Oligo dT is used to reverse transcribe poly A^+ mRNA that can later be used for preparation of RNA using T7 RNA polymerase. The T7 sequence used is the minimal T7 phage promoter sequence requirement for transcription using T7 RNA polymerase.

The product is supplied as a lyophilized powder. Oligo purity is greater than 98% as determined by denaturing polyacrylamide gel electrophoresis.

Reconstitution

Recommended reconstitution is at a concentration of 50 µM (50 pmol/ µl) in RNase-free DEPC treated water or RNase-free TE pH 7.0.

- Spin the tube briefly to bring down the contents of the tube that may have lodged in the cap during shipment. Pellet may be very small and not visible.
- To prepare a 50 µM solution, multiply the total nmol by 20 and add that volume of RNase-free water or TE.
- Store at -20^{o}C or below after reconstitution.

Example: Total nmol = 7.5
7.5 x 20= 150
Add 150 µl of RNase-free water or TE.

Functional Assay Conditions

The conditions given below have been tested to yield first strand cDNA synthesis and is given as an example. Variations and other protocols have been used by other laboratories using this product to yield excellent first strand synthesis. Investigators can substitute their own reaction conditions.

The quality of RNA is very important for the reverse transcription reaction. It is essential to have intact full length RNA as the template material that is free of even trace amounts of RNases and contaminating chemicals. Poor quality RNA template is usually the cause of truncated and incomplete cDNA products.

Add components in the order given below. Reaction volume can be scaled up.

Component	Volume	Comments
poly(A)$^+$ RNA in sterile water Quantity ~1.0 µg	up to 10 µL	Use RNase free reagents and disposables.
RNase-free water	variable	Calculate total volume and add appropriate volume of RNase-free water at this stage.
50 µM oligo (dT) primer solution	2 µL	Final concentration is 5 µM (5 pmol/ µL).
Heat mixture to 70°C for 10 min, and quick chill on ice.		
5X first strand buffer [250 mM Tris-HCl (pH 8.3), 375 mM KCl, 15 mM MgCl2]	4 µL	
0.1 M DTT	2 µL	
dNTPs (5 mM each dNTP)	2 µL	Final concentration is 0.5 mM of each dNTP.
[α-^{32}P]dCTP (1 µCi/µL)	1 µL	Tracer optional. Add only if required.
Reverse transcriptase; 200 units	1- 2 µL	
Total Volume	**20 µL**	
Incubate at 37°C for 1 hour.		

Related Products

Gene Link stocks various oligo dT primers, oligo dTVN primer, Oligo dT T7 primer, random primers, including an array of fluorescent dye labeled primers for genetic analysis using florescent detecting instruments. The C-12 amino labeled primers are ready to be conjugated to the investigators choice of NHS-activated ligand.

Random Primers are a mixture of oligonucleotides representing all possible sequence for that size. Random Primers can be used to prime synthesis in oligo-labeling similar to using hexamers (1,2) and cDNA synthesis. Random prime labeling yields high specific activity labeled DNA probe which can be used for all southern, northern and in situ hybridization studies. Random Primers can be also used similar to using hexamers in cDNA synthesis in combination with oligo dT to yield more 5' end cDNA sequence.

Random Primers Product Ordering Information

Product Description	Size	Catalog No.
Random Hexamers	100ug	26-4000-03
Random Nonamers	100ug	26-4000-06
Random Heptamer Phosphorylated pd(N)7	50ug	26-4000-07
Random Octamer Phosphorylated pd(N)8	50ug	26-4000-08
Random Nonamer Phosphorylated pd(N)9	50ug	26-4000-09
Random Hexamer Phosphorylated pd(N)6	50ug	26-4000-10
Random Heptamer	100ug	26-4000-11
Random Octamer	100ug	26-4000-12
Random 12mers	100ug	26-4000-13
Random 15mer	100ug	26-4000-16
Random 24mers	100ug	26-4000-14
Random 35mers	100ug	26-4000-18
Random 36mers	100ug	26-4000-15
Random 60mer	100ug	26-4000-17
Random Hexamer 72%GC	100ug	26-4001-13
Random Nonamers 72%GC	100ug	26-4001-16
Random 36mer 72%GC	100ug	26-4001-17
Random 60mer 72%GC	100ug	26-4001-18
5'-Dig Random Hexamer	25ug	26-4000-81
5'-Dig Random Heptamer	25ug	26-4000-82
5'-Dig Random Octamer	25ug	26-4000-83
5'-Dig Random Nonamer	25ug	26-4000-84
5'-Amino C12 Random Hexamer	25ug	26-4000-91
5'-Amino C12 Random Heptamer	25ug	26-4000-92
5'-Amino C12 Random Octamer	25ug	26-4000-93
5'-Amino C12 Random Nonamer	25ug	26-4000-94
5'-Biotin Random Hexamer	25ug	26-4001-01
5'-Biotin Random Heptamer	25ug	26-4001-02
5'-Biotin Random Octamer	25ug	26-4001-03
5'-Biotin Random Nonamer	25ug	26-4001-04

Random Primers Product Ordering Information

Product Description	Size	Catalog No.
5'-Cy3 Random Hexamer	25ug	26-4000-21
5'-Cy3 Random Heptamer	25ug	26-4000-22
5'-Cy3 Random Octamer	25ug	26-4000-23
5'-Cy3 Random Nonamer	25ug	26-4000-24
5'-Cy3 Random 36mer	25ug	26-4000-26
5'-Cy3 Random 60mer	25ug	26-4000-25
5'-Cy3 Random Hexamers 72%GC	25ug	26-4001-23
5'-Cy3 Random Nonamers 72%GC	25ug	26-4001-26
5'-Cy3 Random 36mers 72%GC	25ug	26-4001-27
5'-Cy3 Random 60mers 72%GC	25ug	26-4001-28
5'-Cy5 Random Hexamer	25ug	26-4000-31
5'-Cy5 Random Heptamer	25ug	26-4000-32
5'-Cy5 Random Octamer	25ug	26-4000-33
5'-Cy5 Random Nonamer	25ug	26-4000-34
5'-Cy5 Random 36mer	25ug	26-4000-36
5'-Cy5 Random 60mer	25ug	26-4000-35
5'-Cy5 Random Hexamers 72%GC	25ug	26-4001-33
5'-Cy5 Random Nonamers 72%GC	25ug	26-4001-36
5'-Cy5 Random 36mers 72%GC	25ug	26-4001-37
5'-Cy5 Random 60mers 72%GC	25ug	26-4001-38
5'-HEX Random Hexamer	25ug	26-4000-41
5'-HEX Random Heptamer	25ug	26-4000-42
5’-HEX Random Octamer	25ug	26-4000-43
5’-HEX Random Nonamer	25ug	26-4000-44
5’-FAM Random Hexamer	25ug	26-4000-51
5’-FAM Random Heptamer	25ug	26-4000-52
5’-FAM Random Octamer	25ug	26-4000-53
5’-FAM Random Nonamer	25ug	26-4000-54
5’-TET Random Hexamer	25ug	26-4000-61
5’-TET Random Heptamer	25ug	26-4000-62
5'-TET Random Octamer	25ug	26-4000-63
5'-TET Random Nonamer	25ug	26-4000-64
5’-Fl Random Hexamer	25ug	26-4000-71
5’-Fl Random Heptamer	25ug	26-4000-72
5’-Fl Random Octamer	25ug	26-4000-73
5’-Fl Random Nonamer	25ug	26-4000-74

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